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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,903	03/23/2004	Hyunwoo Cho	5649-1216	2404
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EXAMINER AJAYI, JOEL				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,903

Applicant(s)

CHO ET AL.

Examiner

JOEL AJAYI

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8, 10-33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10-33 and 35-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to Applicant's amendment filed on May 16, 2008. **Claims 1, 3-8, 10-25** are still pending in the present application. **This action is made FINAL.**

Response to Arguments

Applicant's arguments filed May 16, 2008 have been fully considered but they are not persuasive.

The argument features that at least one control unit is responsive to the data processor of the wireless terminal.

The examiner agrees that the switching of the communication mode is based on the control signal from the base station, but applicant fails to realize that the processing unit has to process the signal(s) received from the base station in order for the synchronization and switching of the communication modes to take place (Takao, paragraphs 63-66).

The argument features using both an OFDM channel and DSSS channel in the same system.

The examiner respectfully disagrees with the applicant's statement and asserts that Medlock et al. discloses a method of solving the problem of incompatibility between different protocols that are used within the same device to transmit data, these protocols are DSSS and OFDM (DSSS as well as OFDM are used in both wired and wireless applications, paragraph 30, lines 1-6; paragraph 49, lines 8-13). The fact that incompatibility is an issue and addressed by Medlock shows that they are both used in the same system (paragraph 2, lines 1-15, 20-24).

The argument features that the first and second communication channel are implemented using different multiple access techniques.

The examiner respectfully disagrees with the applicant's statement and asserts that Medlock et al. discloses multiple communication protocols, which includes DSSS, TDMA and OFDM that are utilized on multiple channels between communication devices (paragraph 2; paragraph 4; paragraph 30, lines 1-6; paragraph 49, lines 8-13).

The argument features that the first and second communication channel are implemented according to different versions of the 802.11 standard.

The examiner respectfully disagrees with the applicant's statement and asserts that Medlock et al. discloses OFDM and DSSS protocols that are utilized on multiple channels between communication devices (paragraph 2; paragraph 4; paragraph 30, lines 1-6; paragraph 49, lines 8-13). It is well known that 802.11a uses OFDM, while 802.11b uses DSSS.

The argument features using a first communication channel for transmitting data associated with a first application, while using a second communications channel for transmitting data associated with a second application.

The examiner respectfully disagrees with the applicant's statement and asserts that Takao et al. discloses uplink and downlink communications between a mobile device and a base station using frequency links or channels (f1 and f2) (paragraph 29). Examples of the uplink communication include using an email application, which involves sending information to the base station; while downlink communication include accessing homepages with information downloaded from the base station (paragraph 22, lines 5-11).

The argument features transmitting the data associated with a first application over a first channel while transmitting the control information associated with that application over a second channel.

The examiner respectfully disagrees with the applicant's statement and asserts that Takao et al. discloses that the mobile device receives data from the base station (downlink) e.g. homepage on f2 (paragraph 22, lines 5-11; paragraph 29, lines 14-17). The mobile station also transmits control information on f1 (uplink) (paragraph 29, lines 14-17) by deciding what is accessed on the homepage, which will determine what the base station downloads (paragraph 22, lines 5-11).

The argument features that the throughput of the first communication channel exceeds the throughput of the second communication channel.

The examiner respectfully disagrees with the applicant's statement and asserts that Takao et al. discloses that the data amount transmitted on the downlink f2 is larger than that on the uplink f1 (paragraph 22, lines 10 and 11; paragraph 29, lines 14-17).

In view of the above, the rejection using Takao and Medlock is maintained as repeated below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 5-7, 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al. (U.S. Patent Application Number: 2002/0173277)** in view of **Takayama et al. (U.S. Patent Application Number: 2002/0025810)**.

Consider claim 1; Takao clearly discloses a wireless terminal comprising: a data processor (signal processing unit) (paragraph 61, lines 3-6); at least one control unit (the switching controller is used to synchronize the mobile station with the base station, which in turn leads to the use of the various communication modes) that is responsive to the data processor (the switching controller is responsive to the signal processing unit because the signal processing unit provides the baseband signals that will be used by the switching controller) and that controls communications with an access point (base station) over a first communications channel and over a second full-duplex communications channel (uplink and downlink) (paragraph 5, lines 1-13; paragraph 29, lines 1-17); a first interface between the at least one control unit and the first communications channel (communication mode) (paragraph 5, lines 1-13; paragraph 29, lines 1-

17); and a second interface between the at least one control unit and the second communications channel (another communication mode) (paragraph 5, lines 1-13; paragraph 29, lines 1-17); and wherein data associated with a first application running on the wireless terminal is transmitted to the wireless terminal over the first communications channel (downlink), and wherein at least some of the control signals associated with the first application are transmitted from the wireless terminal to the access point (uplink) over the second communications channel (paragraph 22 and 29).

Takao fails to disclose communicating over a wireless local area network; that the at least one control unit comprises a MAC control unit.

In the same field of endeavor Takayama discloses communicating over a wireless local area network (paragraph 32); that the at least one control unit comprises a MAC control unit (paragraph 41, lines 5 and 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Takayama into the method of Takao in order to provide efficient communication between a mobile station and an access point in a WLAN environment.

Consider **claim 3**; Takao discloses a traffic control unit (the switching controller is used to synchronize with the base station, which eventually leads to the switching of modes) (paragraph 67, lines 1-5) that is responsive to the data processor (signal processing unit) (paragraph 63).

Consider **claim 5**; Takayama discloses that the at least one MAC control unit also includes a traffic control unit that forms a data transmission route for each of a plurality of applications running on the wireless terminal (paragraph 43).

Consider **claim 6**; Takao discloses that the first channel comprises a half-duplex channel (downlink) that only carries data from the access point to the wireless terminal (paragraph 29, line 11).

Consider **claim 7**; Takao discloses that data associated with a multi-media application is transmitted over the first channel (paragraph 22 and 29).

Consider **claims 10, 13**; Takayama discloses that the wireless local area network operates at least in part under the IEEE 802.11 standard (IEEE 802.11 term refers to the family of standards) (paragraph 53, lines 7-14).

Consider **claim 11**; Takayama discloses that the first communications channel and the second communications channel are implemented in different frequency bands (paragraph 10).

Consider **claim 12**; Takao discloses that the first and second communications channel are implemented using different multiple access techniques (WCDMA and ACDMA) (paragraph 27 and 28).

Claims 14-18, 22, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al.** (U.S. Patent Application Number: 2002/0173277) in view of **Tzamaloukas et al.** (U.S. Patent Application Number: 2004/0073361).

Consider **claim 14**; Takao clearly discloses a wireless communications system, comprising: a wireless terminal (mobile station) that transmits and receives data (paragraph 29);

an access point (base station) that serves as an interface between the wireless terminal and at least one processing server that is located on at least one external network (paragraph 22, lines 1-11; paragraph 29, lines 1-17); a first communications channel between the wireless terminal and the access point for transmitting data associated with the first application from the access point to the wireless terminal (paragraph 5, lines 1-13; paragraph 29, lines 1-17); and a second communications channel between the wireless terminal and the access point for transmitting data associated with the second application between the wireless terminal and the access point (paragraph 5, lines 1-13; paragraph 29, lines 1-17).

Takao fails to disclose that the first and second applications are running simultaneously on the wireless terminal.

In the same field of endeavor Tzamaloukas discloses that the first and second applications are running simultaneously on the wireless terminal (the application program consists of programs that run simultaneously) (paragraph 35 and 37).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tzamaloukas into the method of Takao in order to provide an enhanced mobile communication device capable of operating in fast moving and high density networks.

Consider **claim 15**; Takao discloses that the second communications channel is further used to transmit control information associated with the first application from the wireless terminal to the access point (paragraphs 22 and 29).

Consider **claim 16**; Takao discloses that the first communications channel is further used to transmit control information associated with the first application from the wireless terminal to the access point (paragraph 29).

Consider **claim 17**; Takao discloses that the throughput of the first communications channel exceeds the throughput of the second communications channel (paragraph 58, lines 1-6).

Consider **claim 18**; Takao discloses that the wireless terminal comprises: (signal processing unit) (paragraph 61, lines 3-6); at least one control unit (the switching controller is used to synchronize the mobile station with the base station, which in turn leads to the use of the various communication modes) that is responsive to the data processor (the switching controller is responsive to the signal processing unit because the signal processing unit provides the baseband signals that will be used by the switching controller) and that controls communications with an access point (base station) over a first communications channel and over the second communications channel (uplink and downlink) (paragraph 5, lines 1-13; paragraph 29, lines 1-17); a first interface between the at least one control unit and the first communications channel (communication mode) (paragraph 5, lines 1-13; paragraph 29, lines 1-17); and a second interface between the at least one control unit and the second communications channel (another communication mode) (paragraph 5, lines 1-13; paragraph 29, lines 1-17).

Takao fails to disclose a MAC control unit that is responsive to the data processor.

In the same field of endeavor Tzamaloukas discloses a MAC control unit that is responsive to the data processor (paragraph 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tzamaloukas into the method of Takao in

order to provide an enhanced mobile communication device capable of operating in fast moving and high density networks.

Consider **claim 22**; Takao discloses that the first channel comprises a unidirectional channel that only transmits data from the access point to the wireless terminal (downlink) (paragraph 29, line 11).

Consider **claim 24**; Takao discloses that at least some of the control signals associated with the first application are transmitted from the wireless terminal to the access point over the second communications channel (paragraph 29).

Consider **claims 25**; Takao discloses that the access point and the wireless terminal communicate (paragraph 29). Tzamaloukas discloses that communication takes place at least in part under the IEEE 802.11 standard (paragraph 15, lines 26-28).

Claim 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al.** (U.S. Patent Application Number: 2002/0173277) in view of **Takayama et al.** (U.S. Patent Application Number: 2002/0025810), and further in view of **Ota et al.** (U.S. Patent Number: 6,115,615).

Consider **claim 4**; Takao and Takayama fail to disclose that the at least one MAC control unit comprises a first MAC control unit for controlling communications with the access point over the first communications channel and a second MAC control unit for controlling communications with the access point over the second communications channel.

In the same field of endeavor Ota discloses that the at least one MAC control unit comprises a first MAC control unit for controlling communications with the access point over

the first communications channel and a second MAC control unit for controlling communications with the access point over the second communications channel (column 9, lines 10-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ota into the method of Takao and Takayama in order to effectively and efficiently switch transmission routes of a packet.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al. (U.S. Patent Application Number: 2002/0173277)** in view of **Takayama et al. (U.S. Patent Application Number: 2002/0025810)**, and further in view of **Medlock et al. (U.S. Patent Application Number: 2002/0062472)**.

Consider **claims 8**; Takao and Takayama fail to disclose that the communication channels are implemented as orthogonal frequency division multiplexing channel and direct sequence spread spectrum communications channel.

In the same field of endeavor Medlock discloses that the communication channels are implemented as orthogonal frequency division multiplexing channel and direct sequence spread spectrum communications channel (paragraph 30, lines 1-17).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Medlock into the method of Takao and Takayama in order to provide an apparatus and a method for preparing data for transmitting from a communication device.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al. (U.S. Patent Application Number: 2002/0173277)** in view of **Tzamaloukas et al. (U.S. Patent Application Number: 2004/0073361)**, and further in view of **Du (U.S. Patent Number: 6,480,480)**.

Consider **claim 19**; Takao and Tzamaloukas fail to disclose that the access point comprises: a second data processor; at least one access point MAC control unit that is responsive to the second data processor and that controls communications with the wireless terminal over the first communications channel and over the second communications channel; a third interface between the at least one access point MAC control unit and the first communications channel; and a fourth interface between the at least one access point MAC control unit and the second communications channel.

In the same field of endeavor Du discloses that the access point (column 9, lines 40-43) comprises: a second data processor (column 3, lines 40-43); at least one access point MAC control unit that is responsive to the second data processor and that controls communications with the wireless terminal over the first communications channel and over the second communications channel (column 3, lines 40-67); a third interface between the at least one access point MAC control unit and the first communications channel; and a fourth interface between the at least one access point MAC control unit and the second communications channel (column 3, lines 40-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Du into the method of Takao and

Tzamaloukas in order to maintain communication between terminals even in the case of a failure of a component.

Consider **claim 20**; Du discloses the wireless terminal further comprises a first traffic control unit that is responsive to the data processor, and wherein the access point further comprises a second traffic control unit that is responsive to the second data processor (column 3, lines 40-67).

Claim 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al. (U.S. Patent Application Number: 2002/0173277)** in view of **Tzamaloukas et al. (U.S. Patent Application Number: 2004/0073361)**, and further in view of **Ota et al. (U.S. Patent Number: 6,115,615)**.

Consider **claim 21**; Takao and Tzamaloukas fail to disclose that the at least one MAC control unit comprises a first MAC control unit for controlling communications with the access point over the first communications channel and a second MAC control unit for controlling communications with the access point over the second communications channel.

In the same field of endeavor Ota discloses that the at least one MAC control unit comprises a first MAC control unit for controlling communications with the access point over the first communications channel and a second MAC control unit for controlling communications with the access point over the second communications channel (column 9, lines 10-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ota into the method of Takao and Tzamaloukas in order to effectively and efficiently switch transmission routes of a packet.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al.** (U.S. **Patent Application Number: 2002/0173277**) in view of **Tzamaloukas et al.** (U.S. **Patent Application Number: 2004/0073361**), and further in view of **Medlock et al.** (U.S. **Patent Application Number: 2002/0062472**).

Consider **claims 23**; Takao and Tzamaloukas fail to disclose that the communication channels are implemented as orthogonal frequency division multiplexing channel and direct sequence spread spectrum communications channel.

In the same field of endeavor Medlock discloses that the communication channels are implemented as orthogonal frequency division multiplexing channel and direct sequence spread spectrum communications channel (paragraph 30, lines 1-17).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Medlock into the method of Takao and Tzamaloukas in order to provide an apparatus and a method for preparing data for transmitting from a communication device.

Response to Arguments

Applicant's arguments with respect to claims 26-33, 35-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 26-33, 35, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Suzuki et al.** (U.S. Patent Application Number: 2002/0006120) in view of **Webster et al.** (U.S. Patent Number: 7,274,652).

Consider **claim 26**; Suzuki discloses a method for supporting a plurality of applications on a wireless terminal (paragraph 23, lines 11-46), the method comprising:

receiving at the wireless terminal over a first communications channel between the wireless terminal and an access point application data associated with a first of the plurality applications (paragraph 23, lines 11-46); establishing a transmission path between the wireless terminal and the access point over a second communications channel for application data associated with a second of the plurality of applications (paragraph 23, lines 11-46); and transmitting application data associated with the second of the plurality applications over the second communications channel via the transmission path (paragraph 23, lines 11-46).

Except: the first and second communications channels are implemented using different multiple access techniques.

In an analogous art, Webster discloses that the first and second communications channels are implemented using different multiple access techniques (column 4, lines 60-66; column 7, lines 35-46; column 13, lines 42-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Suzuki by including multiple access techniques, as taught by Webster, for the purpose of providing dual packet configurations.

Consider **claim 27**; Suzuki discloses transmitting data associated with the first of the plurality applications over the second communications channel via the transmission path (paragraph 23, lines 11-46).

Consider **claim 28**; Suzuki discloses transmitting control data associated with the first of the plurality applications from the wireless terminal to the access point over the first communications channel (paragraph 24).

Consider **claims 29, 35**; Webster discloses that the first communications channel is implemented as an orthogonal frequency division multiplexing channel and wherein the second communications channel is implemented as a direct sequence spread spectrum communications channel (column 4, lines 60-66; column 7, lines 35-46; column 13, lines 42-62).

Consider **claim 30**; Suzuki discloses that the first communications channel is a high throughput uni-directional communications channel (broadcast channel) (paragraph 23, lines 11-46).

Consider **claim 31**; Webster discloses that the wireless local area network operates at least in part under the IEEE 802.11 standard (column 7, lines 35-46; column 13, lines 42-62).

Consider **claim 32**; Suzuki discloses that the first application is a multi-media application (broadcast) (paragraph 23, lines 11-46).

Consider **claim 33**; Suzuki discloses a wireless communication system for transmitting and receiving a data from a plurality of applications (paragraph 23, lines 11-46), comprising:

a wireless terminal for transmitting and receiving data associated with a first of the plurality of applications and for running the first application (paragraph 23, lines 11-46); an access point interfaced with an external processing server, the access point transmitting data associated with a second application of the plurality of applications to the wireless terminal, and forwarding the data associated with the first application that is received from the wireless terminal to the external processing server (paragraph 23, lines 36-52); and a plurality of wireless

channels for transmitting and receiving the data associated with the first and second applications between the wireless terminal and the access point (paragraph 23, lines 11-46); wherein the wireless terminal includes a data processor and at least one control unit that is responsive to the data processor and that controls communications with an access point over the plurality of wireless channels (paragraphs 34-38); and wherein the second application (Advanced Cruise Assist Highway Systems) is remote from the wireless terminal (paragraph 23, lines 7-46).

Except: the plurality of wireless channels operate in different frequency bands and have different throughputs.

In an analogous art, Webster discloses that the plurality of wireless channels operate in different frequency bands and have different throughputs (column 1, lines 15-24; column 13, lines 42-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Suzuki by including multiple access techniques, as taught by Webster, for the purpose of providing dual packet configurations.

Consider **claim 36**; Webster discloses that the plurality of wireless channels include at least two channels that are implemented pursuant to different versions of the 802.11 standard (column 1, lines 15-24; column 13, lines 42-62).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao et al. (U.S. Patent Application Number: 2002/0173277)** in view of **Takayama et al. (U.S. Patent**

Application Number: 2002/0025810), and further in view of Kamel et al. (U.S. Patent Number: 6,285,886).

Consider **claim 37**; Takao and Takayama disclose the claimed invention except: the first communications channel is a full-duplex channel.

In an analogous art, Kamel discloses that the first communications channel is a full-duplex channel (column 5, lines 50-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Takao and Takayama by including a full-duplex channel, as taught by Kamel, for the purpose of controlling a communication system having multiple traffic channels.

Conclusion

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm and Friday 7:30am to 4:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Joel Ajayi

/Lester Kincaid/

Supervisory Patent Examiner, Art Unit 2617